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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,618	04/13/2001	Tarou Kanamori	206171US0	3729

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EXAMINER

ROBERTSON, JEFFREY

ART UNIT PAPER NUMBER

1712

DATE MAILED: 07/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,618

Applicant(s)

KANAMORI ET AL.

Examiner

Jeffrey B. Robertson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 and 7-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements filed 7/09/01 and 6/10/02 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Abstracts of foreign patents should be listed in the "OTHER REFERENCES" section if no copy of the foreign patent is provided, because an English abstract does not qualify as a foreign patent document. The examiner has listed the Japanese abstracts in the other references section and on the accompanying PTO-form 892.

Claim Objections

2. Claims 4, and 7-9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4, and 7-9 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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For claim 1, in line 6, the significance of the limitation "having an SiO bond" is not known, because by definition an organosiloxane oligomer would have oxygen bound to a silicon. Is the SiO bond to a pendant group?

For claim 5, there appears to be some words missing after "one" in line 2 of the claim. What does one refer to in the claim? Is it simply the members of the Markush group?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 5 and 6 are rejected under 35 U.S.C. 102(a) as being anticipated by Takahama et al. (EP 0 989 166 A1).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

For claims 5 and 6, Takahama teaches a coating composition on page 2, paragraph [0009]. On page 3, paragraph [0020], Takahama teaches an organosilane such as glycidoxypropyltrimethoxysilane, which falls within the definition of the organosilane (a-1) of claim 6. On page 3, paragraph [0028], Takahama teaches that the pH of the resin is preferably from 3.0 to 6.0, which is within the range claimed by applicant. On page 6, paragraph [0048], Takahama teaches that a photocatalyst that is

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preferably in sol form, where the dispersion medium can be water. In Example 1, page 12, paragraph [0110], Takahama teaches a method of hydrolyzing and condensing an organosilane where the organic solvent used is isopropyl alcohol, which has a surface tension of below 260 $\mu\text{N}/\text{cm}$. Since this is the only organic solvent added, there is less than 20% of an organic solvent with a surface tension of more than 260 $\mu\text{N}/\text{cm}$ added to the composition.

7. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 102(a) as being anticipated by Kanamori et al. (EP 1,022,318 A2).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

For claims 1 and 2, Kanamori teaches photocatalyst containing coating layers on page 3, paragraph [0012], where the composition contains an organosilane, or a mixture of an organosilane with a hydrolyzate or condensate thereof in component (a), a photocatalyst, and a polymer component that has a silyl group having silicon atoms bonded with a hydrolytic and or hydroxyl group. The organosilane is of formula (1) which overlaps with applicant's formula (1). On page 5, paragraphs [0037] and [0038], Kanamori teaches that component (a) partially contains a siloxane oligomer with a molecular weight from 300 to 100,000. For claim 5, on page 29, paragraph [0229], the photocatalyst *3 is a water-based dispersion having a pH of 4. In addition, in Table 7, page 29, there are no organic solvents present with a surface tension of more than 260 $\mu\text{N}/\text{cm}$ added to the composition. Further, for claims 3 and 6, on page 5 paragraph

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[0034], Kanamori teaches that the organosilane is methyltrimethoxysilane. On page 6, paragraph [0053], Kanamori teaches a photocatalyst in sol form. On page 7, paragraph [0057] Kanamori teaches that the sol is an aqueous sol. In Table 2, on page 24, Kanamori teaches that an organic solvent used is isopropyl alcohol, which has a surface tension of below 260 $\mu\text{N/cm}$.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nagaoka (U.S. Patent No. 5,015,413), and Sakagami et al. (U.S. Patent No. 5,306,759) are being cited for teaching similar compositions as applicant, however none teaches the presence of a photocatalyst. Takahama et al. (U.S. Patent No. 6,221,498) is being cited for teaching similar compositions, but Takahama does not teach the use of an organic solvent with applicant's surface tension requirements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JBR

July 1, 2002



Robert Dawson
Supervisory Patent Examiner
Technology Center 1700